Title (en)
SYSTEMS AND METHODS FOR PROCESSING 3D ANATOMICAL VOLUMES BASED ON LOCALIZATION OF 2D SLICES THEREOF

Title (de)
SYSTEME UND VERFAHREN ZUR VERARBEITUNG ANATOMISCHER 3D-VOLUMINA BASIEREND AUF DER LOKALISIERUNG VON 2D-SCHEIBEN DAVON

Title (fr)
SYSTÈMES ET PROCÉDÉS DE TRAITEMENT DE VOLUMES ANATOMIQUES 3D SUR LA BASE DE LA LOCALISATION DE LEURS TRANCHES 2D

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Application
EP 20167010 A 20200331

Priority
US 201916382235 A 20190412

Abstract (en)
There is provided a computer implemented method for localizing target anatomical regions of interest (ROI) of a target individual, comprising: uniformly subsampling (306) a plurality of 2D images having sequential index numbers within a 3D anatomical volume, feeding (308) the plurality of sampled 2D images into a classifier for outputting a plurality of values on a normalized anatomical scale, fitting (310) a linear model to the plurality of values and corresponding sequential index numbers, mapping (316) by the linear model, the plurality of 2D images to the normalized anatomical scale, receiving (318) an indication of at least one target anatomical ROI of a target individual, wherein each target anatomical ROI is mapped to the normalized anatomical scale, and providing (320) a sub-set of the plurality of 2D images having values of the normalized anatomical scale corresponding to the received at least one target anatomical ROI.

IPC 8 full level
G06V 10/25 (2022.01)

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G06T 7/0012 (2013.01 - US); **G06V 10/25** (2022.01 - EP US); **G06V 10/454** (2022.01 - EP US); **G06V 10/82** (2022.01 - EP US);
G16H 30/20 (2017.12 - US); **G16H 30/40** (2017.12 - US); G06T 2207/10081 (2013.01 - US); G06V 2201/03 (2022.01 - EP)

Citation (search report)
• [I] KE YAN ET AL: "Unsupervised Body Part Regression via spatially self-ordering Convolutional Neural Networks (version 2)", 7 March 2018 (2018-03-07), pages 1 - 5, XP055728477, Retrieved from the Internet <URL:https://arxiv.org/pdf/1707.03891.pdf> [retrieved on 20200908]
• [T] "Abdomen and Thoracic Imaging An Engineering Clinical Perspective", 1 January 2014, SPRINGER, article AYMAN EL-BAZ: "Abdomen and Thoracic Imaging An Engineering Clinical Perspective.", pages: 78, XP055728485
• [I] PENGYUE ZHANG ET AL: "Self-Supervised Deep Representation Learning for Fine-Grained Body Part Recognition", 2017 IEEE 14TH INTERNATIONAL SYMPOSIUM ON BIOMEDICAL IMAGING (ISBI) IEEE PISCATAWAY, NJ, USA, 1 April 2017 (2017-04-01), pages 578 - 582, XP055728786, ISBN: 978-1-5090-1172-8, DOI: 10.1109/ISBI.2017.7950587

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